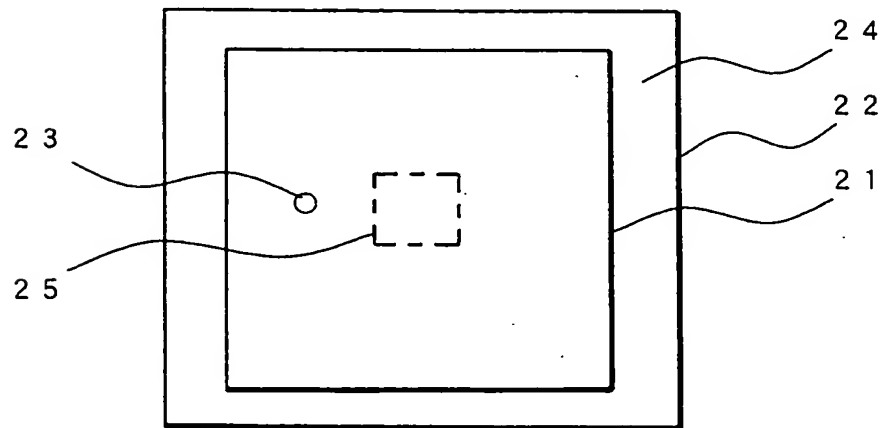
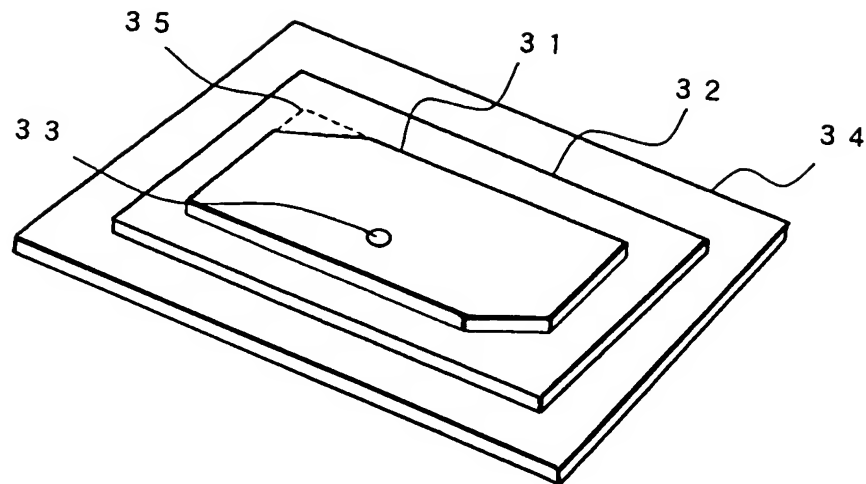


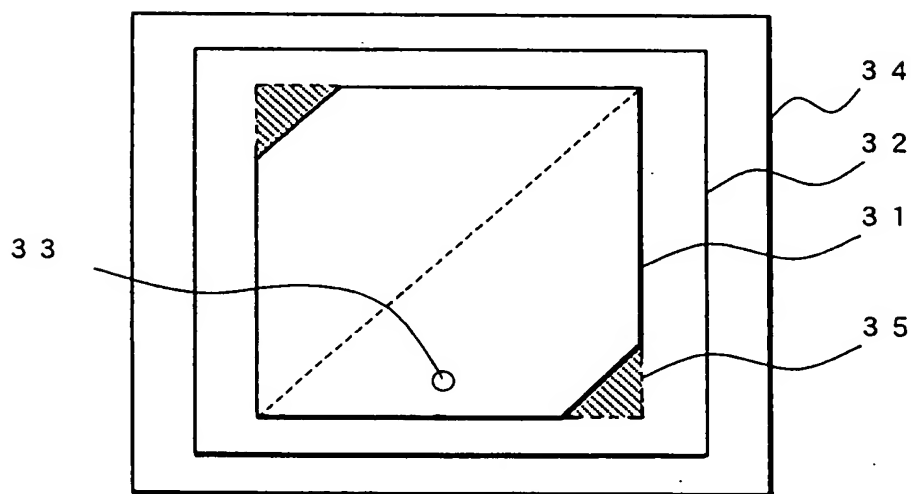
**FIG. 1** PRIOR ART



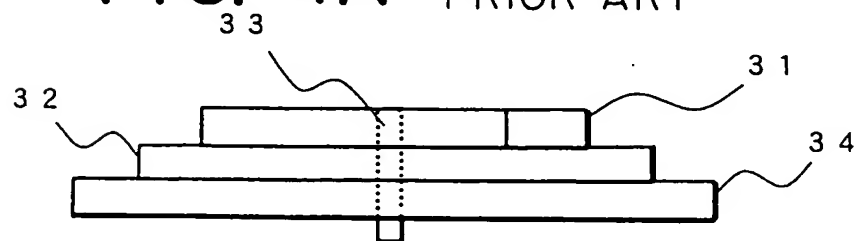
**FIG. 2** PRIOR ART



**FIG. 3** PRIOR ART



**FIG. 4A** PRIOR ART



**FIG. 4B** PRIOR ART

FIG. 5A

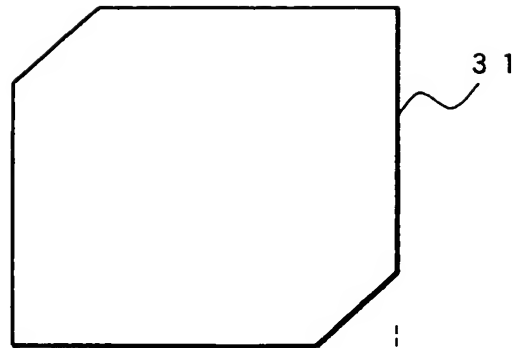


FIG. 5B

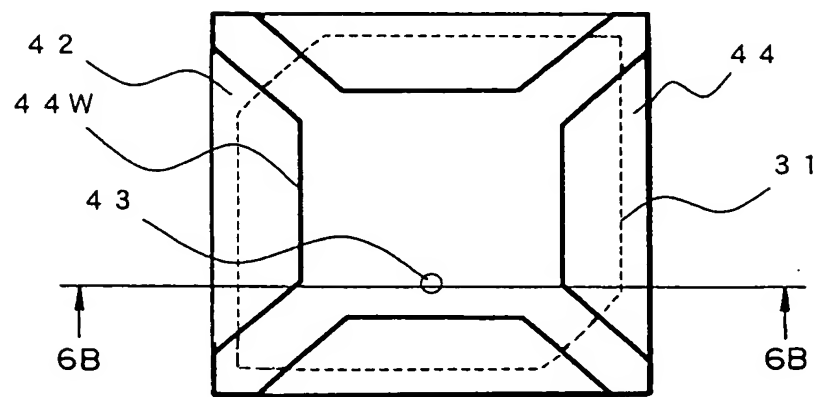
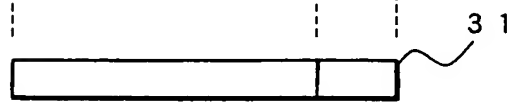


FIG. 6A

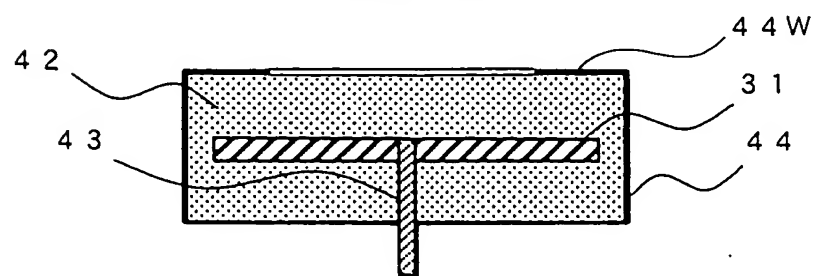


FIG. 6B

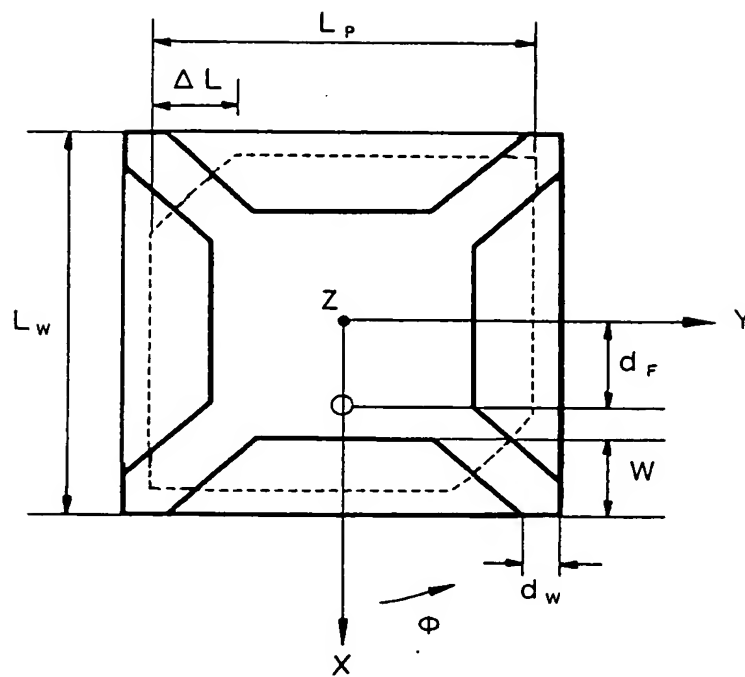


FIG. 7A

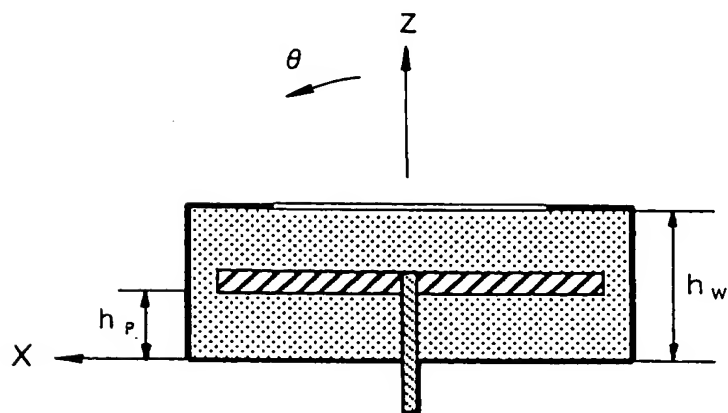


FIG. 7B

$$f = 2.33875 \text{ [GHz]}$$

$$\Delta x = \Delta y = \Delta z = 0.010325 \lambda_{2.3} \equiv \Delta \approx 1.325 \text{ [mm]}$$

$$L_p = 3.6 \Delta \approx 47.68 \text{ [mm]}$$

$$\Delta L = 8 \Delta \approx 10.60 \text{ [mm]}$$

$$d_F = 1.1 \Delta \approx 14.11 \text{ [mm]}$$

$$h_p = 2 \Delta \approx 2.57 \text{ [mm]}$$

$$\varepsilon_r = 1$$

$$d_w = 6 \Delta \approx 7.95 \text{ [mm]}$$

$$W = 1.0 \Delta \approx 12.83 \text{ [mm]}$$

$$h_w = 4 \Delta \approx 5.14 \text{ [mm]}$$

$$L_w = 4.8 \Delta \approx 63.57 \text{ [mm]}$$

**FIG. 8**

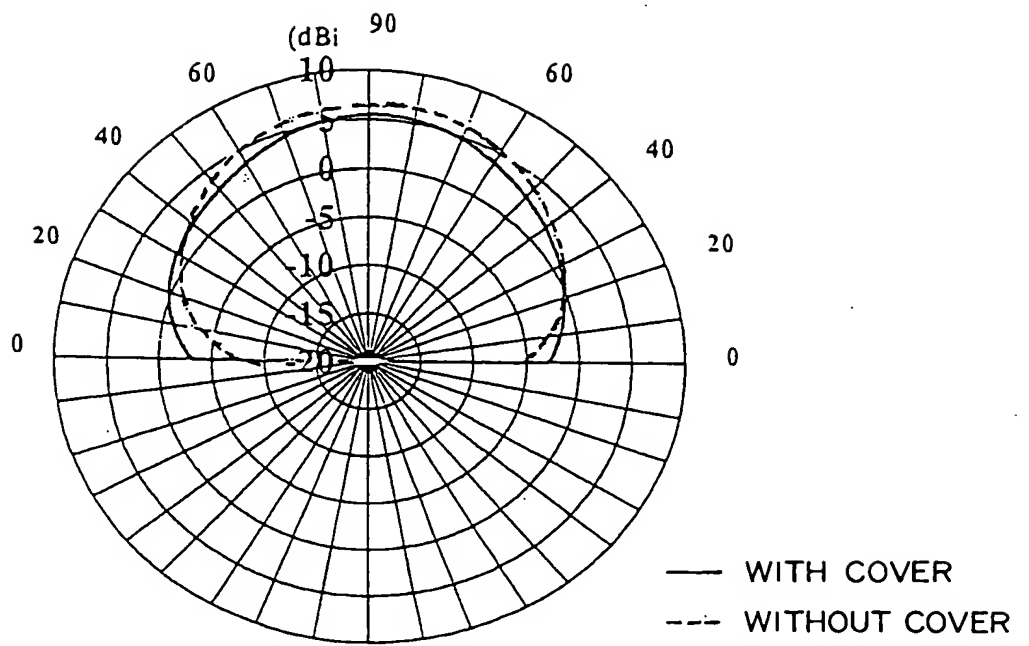


FIG. 9

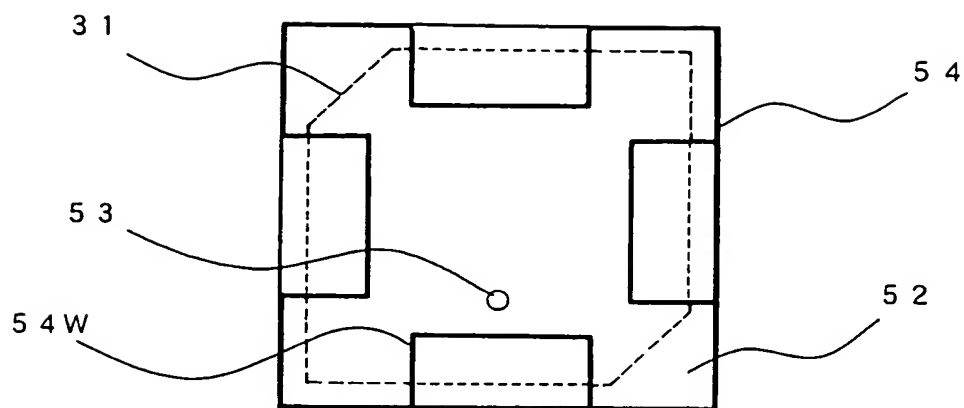


FIG. 10

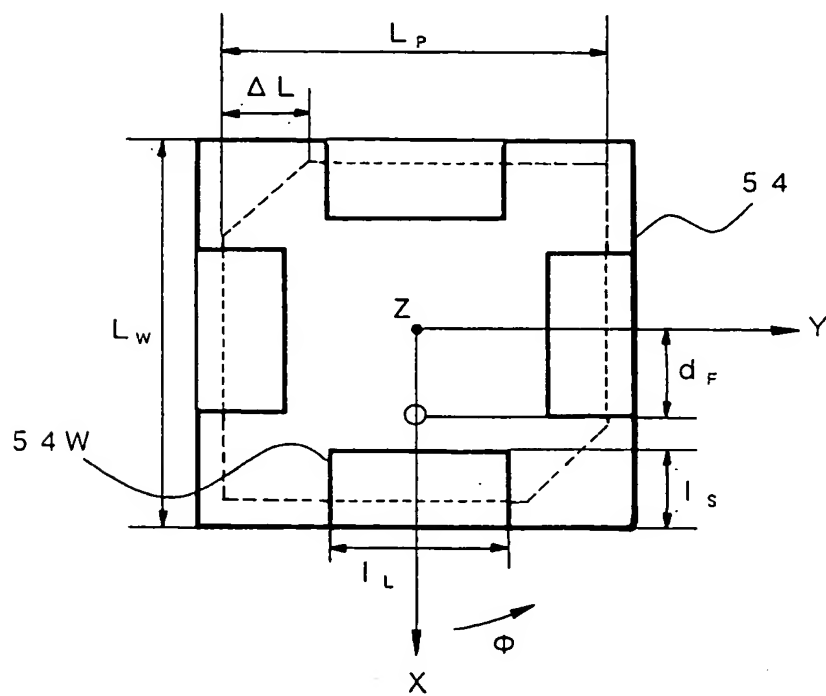


FIG. 11

$$f = 2.33875 \text{ [GHz]}$$

$$\Delta x = \Delta y = \Delta z = 0.010325 \quad \lambda_{z,3} \equiv \Delta \approx 1.325 \text{ [mm]}$$

$$L_p = 3.6 \Delta \approx 47.68 \text{ [mm]}$$

$$\Delta L = 9 \Delta \approx 11.925 \text{ [mm]}$$

$$d_F = 1.1 \Delta \approx 14.11 \text{ [mm]}$$

$$h_p = 2 \Delta \approx 2.57 \text{ [mm]}$$

$$\varepsilon_r = 1$$

$$l_L = 1.4 \Delta \approx 18.55 \text{ [mm]}$$

$$l_s = 1.0 \Delta \approx 12.83 \text{ [mm]}$$

$$h_w = 4 \Delta \approx 5.14 \text{ [mm]}$$

$$L_w = 4.8 \Delta \approx 63.57 \text{ [mm]}$$

**FIG. 12**